

## CLAIMS

1. A speech recognition system comprising:  
5 a line of service including:  
a first server object coupled to a telephone network for receiving a  
voice data message from said telephone network;  
a second server object having a first connection to said first server  
object for receiving said voice data message from said first server object  
10 and converting said voice data message to a phonetic data message;  
a third server object having a second connection to said second  
server object for receiving said phonetic data message from said second  
server object and converting said phonetic data message to a syntactic data  
message; and  
15 a fourth server object having a third connection to said third server  
object for receiving said syntactic data message from said third server  
object and converting said syntactic data message to a semantic data  
message, which is representative of said voice data message;  
wherein said first, second and third connections are formed over a first  
20 computer network.

2. The system of claim 1 wherein said fourth server object is coupled  
to a second computer network for receiving an application code from a client of  
said second computer network, said application code providing control data for  
25 the operation of said speech recognition system.

3. The system of claim 1 wherein said first computer network is one  
of a local area network and the internet.

4. The system of claim 2 wherein said second computer network is one of a local area network and the internet.

5 5. The system of claim 4 wherein said first, second and third connections are formed from named pipes.

6. The system of claim 5 further comprising a control monitor for controlling the configuration of said first, second, third and fourth server objects  
10 in said line of service.

7. The system of claim 6 wherein at least one of said first, second, third and fourth server objects periodically transmits a status signal to said system monitor, wherein the transmission of said periodic status signal from said at least  
15 one of said first, second, third and fourth server objects to said system monitor indicates that said one of said first, second, third and fourth server objects is operational.

8. The system of claim 7 wherein a nontransmission of said periodic status signal from said at least one of said first, second, third and fourth server  
20 objects to said system monitor indicates that said one of said first, second, third and fourth server objects is disabled.

9. The system of claim 6 further comprising at least one backup  
25 server object which is configured into the system by the system monitor when said at least one of said first, second, third and fourth server objects is disabled.

10. The system of claim 6 wherein said first, second, third and fourth server objects are configured by said system monitor according to the Distributed Component Object Model (DCOM).

5           11. The system of claim 10 wherein each of said first, second, third and fourth server objects include a post office for addressing and routing said voice data message, said phonetic data message, said syntactic data message and said semantic data message through said line of service from said telephone network to said second computer network.

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12. The system of claim 10 further comprising additional lines of service connected between said telephone network and said second computer network.

15           13. The system of claim 6 wherein said first, second, third and fourth server objects are remote with respect to each other.

14. A method of processing speech comprising:
- A. receiving, at a first server object, a voice data message from a telephone network;
  - B. transmitting said voice data message over a first computer network to a second server object;
  - C. converting said voice data message to a phonetic data message in said second server object;
  - D. transmitting said phonetic data message from said second server object to a third server object over said first computer network;
  - E. converting said phonetic data message to a syntactic data message in said third server object;
  - F. transmitting said syntactic data message from said third server object to a fourth server object over said first computer network; and
  - G. . converting said syntactic data message to a semantic data message representative of said voice data message in said fourth server object.

15. The method of claim 14 further comprising downloading an application code from a second computer network, wherein said application code includes control code for controlling operation of said first, second, third and fourth server objects.

16. The method of claim 15 wherein said first computer network is one of a local area network and the internet.

17. The method of claim 16 wherein said second computer network is one of a local area network and the internet.

18. The method of claim 17 wherein steps B, D and F comprise transmitting said voice data message, said phonetic data message and said syntactic data message, respectively, over named pipes.

5 19. The method of claim 17 further comprising configuring said first, second, third and fourth server objects with a control monitor.

20. The method of claim 19 further comprising the step of at least one of said first, second, third and fourth server objects transmitting a status signal to  
10 said control monitor, wherein the transmission of said periodic status signal from said at least one of said first, second, third and fourth server objects to said control monitor indicates that said at least of said first, second, third and fourth server objects is operational.

15 21. The method of claim 20 wherein the nontransmission of said periodic status signal from said at least one of said first, second, third and fourth server objects to said control monitor indicates that said at least of said first, second, third and fourth server objects is disabled.

20 22. The method of claim 17 wherein said first, second, third and fourth server objects are configured by said system monitor according to the Distributed Component Object Model (DCOM).

23. The method of claim 17 further comprising processing said  
25 semantic data message in said fourth server object according to said application code.

24. A speech recognition system comprising:

a line of service including:

a voice server object coupled to a telephone network for receiving  
5 a voice data message from said telephone network;

a speech recognition server having a connection to said voice  
server object for receiving said voice data message from said voice server  
object and converting said voice data message to a phonetic data message  
and converting said phonetic data message to a syntactic data message;

10 and

a task server object having a connection to said speech recognition  
server for receiving said syntactic data message from said speech  
recognition server object and converting said syntactic data message to a  
semantic data message, which is representative of said voice data  
15 message;

wherein said connections between said voice server object, said speech  
recognition server and said task server object are formed over a first computer  
network.

20 25. The system of claim 24 wherein said task server object is coupled  
to a second computer network for receiving an application code from a client of  
said second computer network, said application code providing control data for  
the operation of said speech recognition system.

25 26. The system of claim 24 wherein said first computer network is one  
of a local area network and the internet.

27. The system of claim 25 wherein said second computer network is one of a local area network and the internet.

28. The system of claim 27 wherein said connections are formed from  
5 named pipes.

29. The system of claim 28 further comprising a control monitor for controlling the configuration of said voice server object, said speech recognition server and said task server object in said line of service.  
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30. The system of claim 29 wherein at least one of said voice server object, said speech recognition server and said task server object periodically transmits a status signal to said system monitor, wherein the transmission of said periodic status signal from said at least one of said first, second, third and fourth  
15 server objects to said system monitor indicates that said one of said first, second, third and fourth server objects is operational.

31. The system of claim 30 wherein a nontransmission of said periodic status signal from said at least one of said voice server object, said speech  
20 recognition server and said task server object to said system monitor indicates that said at least one of said voice server object, said speech recognition server and said task server object is disabled.

32. The system of claim 29 further comprising at least one backup  
25 server object which is configured into the system by the system monitor when said at least one of said voice server object, said speech recognition server and said task server object is disabled.

33. The system of claim 29 wherein said voice server object, said speech recognition server and said task server object are configured by said system monitor according to the Distributed Component Object Model (DCOM).

34. The system of claim 33 wherein each of said voice server object, said speech recognition server and said task server object include a post office for addressing and routing said voice data message, said phonetic data message, said syntactic data message and said semantic data message through said line of service from said telephone network to said second computer network.

35. The system of claim 33 further comprising additional lines of service connected between said telephone network and said second computer network.

36. The system of claim 27 wherein said speech recognition server comprises an acoustic server object for receiving said voice data message from said voice server object and converting said voice data message to said phonetic data message and a symbolic server object for receiving said phonetic data message from said acoustic server object and converting said phonetic data message to said syntactic data message.

37. The system of claim 36 wherein said voice, acoustic, symbolic and task server objects are remote with respect to each other.



38. The system of claim 27 wherein said voice server object, said speech recognition server and said task server object are remote with respect to each other.

1.0 2.0 3.0 4.0 5.0 6.0 7.0 8.0 9.0 10.0 11.0 12.0 13.0 14.0 15.0 16.0 17.0 18.0 19.0 20.0 21.0 22.0 23.0 24.0 25.0 26.0 27.0 28.0 29.0 30.0 31.0 32.0 33.0 34.0 35.0 36.0 37.0 38.0 39.0 40.0 41.0 42.0 43.0 44.0 45.0 46.0 47.0 48.0 49.0 50.0 51.0 52.0 53.0 54.0 55.0 56.0 57.0 58.0 59.0 60.0 61.0 62.0 63.0 64.0 65.0 66.0 67.0 68.0 69.0 70.0 71.0 72.0 73.0 74.0 75.0 76.0 77.0 78.0 79.0 80.0 81.0 82.0 83.0 84.0 85.0 86.0 87.0 88.0 89.0 90.0 91.0 92.0 93.0 94.0 95.0 96.0 97.0 98.0 99.0 100.0